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Five integrated valve amplifiers designed to have you glowing with pride

REVIEWS BY JOHN BAMFORD

LAB TESTS BY PAUL MILLER

While arguments continue in the world of high-end audio regarding the relative merits of analogue versus digital recording and whether high-fidelity sound replay in the home is best achieved via vinyl LPs or compact discs, similarly audio professionals and hi-fi enthusiasts continue to debate the relative merits of valve versus solid-state amplifiers.

When fledgling transistor technology emerged in the 1960s it was touted as a death knell for the thermionic valve in high-fidelity amplifiers, just as the birth of CD in 1982/3 was proclaimed 'perfect sound forever' and the writing was on the wall for vinyl records. Nevertheless the LP survives to this day, albeit as a niche product predominantly for a small sector of the audiophile community... and disc jockeys, of course. Similarly there is still a thriving specialised market for 'old-fashioned' tube amplifiers.

FUZZY LOGIC

Advocates of valve amps will listen to nothing else, claiming acute sensitivity to a grainy harshness in transistor-based amplifiers – especially Class B crossover distortion – and accusing solid-state electronics of possessing a monochromatic, sterile, matter-of-fact quality that lacks soul and musicality. These are similar to the complaints that analogue LP lovers make of digital media and replay systems, claiming that these tend to rob music of emotion and deliver a sterile imitation of 'the real thing'.

Conversely there are devotees of high-powered transistor amplifiers who adore the grip, speed, muscular swagger and 'tight rhythm' of high quality solid-state muscle amps. Detractors of valve amps are quick to point out that their distortion characteristics are woeful compared to modern solid-state designs. And they would be right. [See PM's Lab Reports on page 61.] Yet while the distortion levels appear atrocious they are no worse than most loudspeakers anyway. And at low power levels, where both speaker and the listener's ear exhibit less distortion, a good valve amplifier is perfectly suitable for hi-fi listening.

In case you hadn't noticed, here at *HFN* we don't presume to judge who is right or wrong in such matters. Fact is, if one enthusiast is enjoying hi-fi bliss at home playing LPs through a valve amplifier while another is in audio ecstasy playing CDs through solid-state amplification, why presume that one of them is sensible, level-headed and perceptively 'correct', the other ill-informed, misguided and quite obviously 'deaf'? The audio industry is littered with people holding forthright ideas, affected by emotion and strong belief that they and only they are correct. Yet experience shows that there are many ways of skinning the proverbial cat. Two of the finest systems I have ever experienced,

'Advocates of valve amps accuse transistors of lacking soul and musicality'

auditioning studio master tapes in acoustically controlled environments, have been powered alternatively by tubes and transistors.

Meanwhile many manufacturers of valve amplifiers also produce hybrid models combining valve preamp stages with solid-state power amps, claiming to offer the 'best of both worlds': the purity and sweet tonal colour of valves with the control and powerful grip of transistors. And the world is full of audio enthusiasts who choose to employ a valve preamp alongside a solid-state power amp.

A HAPPY MARRIAGE

The secret to building any successful system of separates is harmonious matching of individual components. With valve amplifiers, matching with partnering loudspeakers is absolutely critical. Unless one's valve amplifier costs as much as a terraced house in Oldham and requires two very strong men to lift it, valve amps tend to be low-powered animals necessitating sensitive loudspeakers. With low-powered integrated models such as the five we have here, speakers with a sensitivity rating >89dB

AUDIO FILE

EAR-Yoshino 8L6
Price: £3100
Tel: 01223 208877
www.ear-yoshino.com

PrimaLuna DiaLogue One
Price: £2050
Tel: 020 8971 3900
www.primaluna.nl

Pure Sound A30
£1400
Tel: 01822 612449
www.puresound.info

Shanling STP-80
£1300
Tel: 0870 9096777
www.shanling.com

Unison Research P40
£3200
Tel: 01753 652669
www.unisonresearch.com



are a prerequisite in order to deliver sensible sound pressure levels with all type of music programme in anything but the smallest of rooms. Small, inefficient standmount monitors are out; larger floorstanders (and horns, of course!) are very much in.

Equally crucial is the nature of your loudspeaker's impedance characteristic. As a speaker's impedance lowers, then more current flows through the speaker coils, increasing demand on the amplifier and introducing a slight risk of damage, typically to the speaker, if the amp cannot cope.

With valve amps especially, unless the speaker has a flat impedance curve, the effect of any significant source/output impedance from the amplifier is to alter the frequency response of the system. This interaction can cause a dramatic tonal imbalance if the amp and speaker are not sympathetically matched. A specialist audiophile dealer with experience of valve amplifiers should advise accordingly.

While fearful of stating the obvious I feel obliged to point out that with many valve amplifiers the 'bottles' are exposed and the glass becomes far too hot to touch. Valves, in fact, are pretty robust devices and are nowhere near as fragile as incandescent light bulbs. Nevertheless a valve amp needs adequate ventilation and is best sited well out of reach of young children.

One needs to consider cost of ownership, too. Valves deteriorate at a fairly steady rate, and replacement every few years will be required for top performance to be maintained. This won't always be a matter of simply replacing a valve – almost invariably, matched sets are required even though optimising the grid bias voltage level is rarely required these days with most modern valve amp designs featuring auto biasing.

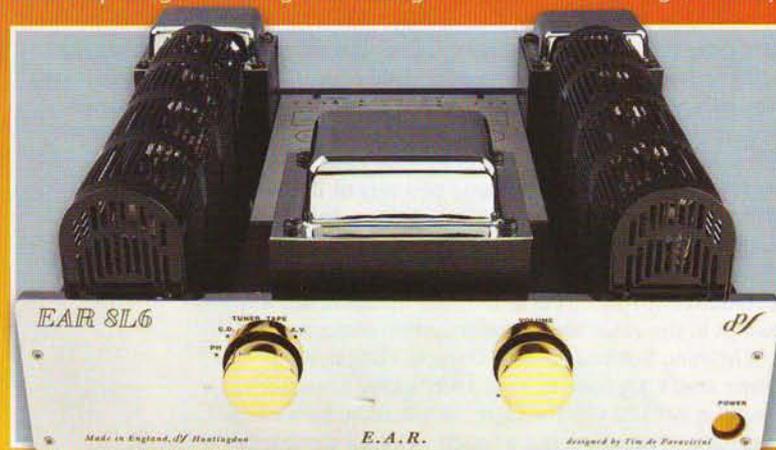


LINING THEM UP

EAR's 8L6 is a relative newcomer to EAR-Yoshino's line-up, although it is pretty much identical to the company's venerable 834 model introduced some ten years ago – so called as it employs eight EL34/6L6 output valves. This 8L6 model differs in that it can be used as a separate passive preamp and power amp, with pre-out and power amp input sockets provided at the rear. In addition to the eight 6L6s are two ECC83 and two ECC85 valves. As always with EAR amplifiers, the heavy rotary controls on the fascia have a smooth feel and overall build quality is top drawer, EAR's custom-designed transformers capped in polished chrome. The 8L6 is however 'manual drive', with no remote control.

Primaluna's DiaLogue One is an EL34-based design, similarly hand-made with point-to-point wiring

ABOVE: EAR-Yoshino's 8L6 has five line inputs and one line-level (fixed) output labelled Tape Out. In addition there are preamp outputs and power amp inputs, allowing the use of an external processor or equaliser



EAR-Yoshino 8L6

Based in Cambridgeshire, EAR-Yoshino is the marque of audio guru Tim de Paravicini. While regarded by many as the patron saint of valves, Tim is responsible for some legendary solid-state amplifier circuit design too – such as Musical Fidelity's classic A1 20W Class A integrated nearly a quarter of a century ago. Like many dedicated engineers with specialist knowledge, Tim designs as much as possible himself. This includes the crucial output transformers, something at which he is an expert. Tim's expertise includes rebuilding and turbo-charging vintage professional analogue tape machines used in many studios around the world.



throughout. Again, custom-made transformers are used, here with a toroidal transformer employed for the power supply. The chassis is heavy gauge steel, finished with five coats of paint, hand rubbed and polished to an immaculate (though understated) finish. It boasts high quality components throughout and comes with an extraordinarily high quality remote control handset for source selection, volume control and switching between ultralinear or triode amplification. The remote control also operates one of PrimaLuna's CD players.

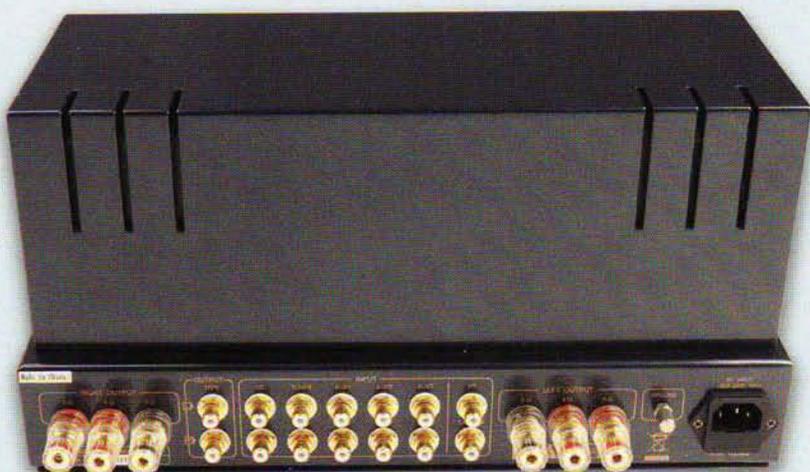
In contrast – and considerably cheaper – is Pure Sound's A30, somewhat utilitarian in appearance and with its exposed valves looking decidedly minimalist. Features are somewhat minimal too, with an on/off rotary switch, manual volume control and rotary selector to switch between just three line inputs. As with the EAR there is no remote control operation. The A30 uses four Russian Electro Harmonix 6550 output valves and a pair of 6N9Ps, a pair of 6N8Ps and a pair of 5Z3Ps. It might look utilitarian, but build quality is fine and it's a lot of amplifier for the price. Like the PrimaLuna it can be switched from ultralinear to triode operation with a subsequent reduction in power output.

As with all its products, Shanling's STP-80 is distinctively 'retro' styled with a high quality of finish that belies its modest price. Using a complement of four EL34 output valves and three 6N3P valves it features

'PrimaLuna might sound Italian, but the company is based in the Netherlands'

a dot-matrix VFD display on the front to show source selection and volume setting. This can be dimmed but not entirely defeated, while a bright blue 'power on' LED remains at full brightness at all times, which some might find distracting. Source selection is via up/down buttons on the left-hand side of the top plate; a switched-resistor volume control is governed by matching up/down buttons on the right of the top plate. While perhaps more a case of style over real-world practicality, these controls matter not – as the amplifier comes with a full-function remote control handset that is pleasingly solid and will operate an entire Shanling system, not just the STP-80.

Finally we have Unison Research's P40 integrated, employing a complement of four EL34s, two ECC82s and a pair of ECC83s. This Class AB model lacks the distinctive wooden



case detailing of many Unison Research models and to these eyes it looks a little 'clunky' in its styling, although its purposeful and decidedly retro form was admired by some visitors to my listening room. Extremely heavy, chunky rotary controls cover power on/off, source selection and volume. Only the volume operates by remote control, Unison Research shipping the P40 with a wooden-bodied handset that really doesn't match the amplifier. It's a handset for a Unison Research system, festooned with about 30 identical tiny buttons of which you will use just two: volume up and volume down!

BASKING IN THE GLOW

For auditioning, many enjoyable hours were spent listening to all five amplifiers using my venerable Townshend Rock Reference turntable with matching Excalibur arm, currently fitted with Ortofon's sublime Kontrapunkt MC cartridge. Phono stage was a Graham Slee Projects' Gram Amp 3 Fanfare. Compact discs were spun on Harman Kardon's recently introduced HD990 [see *HFN* May '09] alongside a Pioneer DV-868AVi universal player used for playing SACDs and DVD-Audio discs. Analogue and digital sources were connected to each amp in turn using the same two sets of Townshend DCT300 interconnects. Loudspeakers were Monitor Audio PL300 floorstanders with 90dB sensitivity and 6ohm overall impedance. Importantly the PL300s have a smooth impedance curve that will minimise any big swings in the valve amp/speaker system response.

Listening first to familiar CD tracks I began with Diana Krall's 'My Love Is' from 1997's *Love Scenes* [Impulse IMP12342]. Through EAR's 8L6 the bass intro was full and rounded, but a touch soft with some lack of 'slap' to the plucked strings. Moreover Diana Krall's voice sounded a touch lazy as if it the edges had been

ABOVE: PrimaLuna's DiaLogue One has five line inputs and a line-level 'Tape' output. Additionally there's a pre-out/power amp in terminal pair that PrimaLuna refer to as HT Pass-Thru. So as with the EAR 8L6 this allows the DiaLogue One to be used to drive the front speakers in a 'Home Theater' (HT) system

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PrimaLuna DiaLogue One

While it might sound like an Italian brand (prima luna is first moon in Italian), the PrimaLuna company is in fact based in the Netherlands. Founded just five years ago, PrimaLuna is headed up by industry veteran Herman van den Dungen, a well-known high-end audio distributor in the Netherlands who famously first introduced the West to Koetsu cartridges 30 years ago. PrimaLuna's designer is Marcel Croese, previously with Goldmund in Switzerland, while manufacturing of PrimaLuna's product range is in China which accounts for the marque's competitive pricing. PrimaLuna is distributed in the UK by Absolute Sounds.

over-polished. Whereas EAR amplifiers are renowned for 'not sounding like typical valve amps' I thought that this really did sound like one. It was rather laidback, mellow, and oh-so-smooth.

Switching to the PrimaLuna DiaLogue One, the sound was immediately more vibrant and crisp. Far from lazy, Diana Krall's vocal displayed clearer diction, alongside fast leading edges to the plucked bass strings that brought a real sense of occasion to the music. The PrimaLuna added space and air to the image that brought the track alive. Similar in its tonal palette, Pure Sound's A30 also sounded up-beat and quick-footed with this Diana Krall track. It was lean compared with the EAR, but as a consequence sounded fast and highly detailed. I noted it sounded a touch over-exhilarating in upper mid frequencies – with a little 'edge' to the vocal that might prove tiring long-term.

Switching to Shanling's STP-80 the double bass intro was a touch leaner still. So too was Diana Krall's voice, sounding nasal in comparison to the delivery from the other amplifiers. Consonants in her vocal delivery came across with clean leading edges but her tone appeared bleached of colour and the percussive finger-clicks throughout the track had taken on an unreal character, sounding like the 'clack' of wood blocks.

Finally to the Unison Research P40. This delivered a pleasing enough twang to the plucked strings of the double bass while Diana's voice was both light and simultaneously velvety in texture. But the image

'Pure Sound's A30 is minimalist in the extreme, with just three line inputs'

seemed a little closed-in compared with the PrimaLuna, Pure Sound and Shanling amps that had preceded it. If the EAR was to be described as 'lush', so too was the Unison Research in that it sounded fulsome in the lower registers, with a darker shading than the Shanling, Pure Sound and PrimaLuna models.

Staying with familiar CD tracks I moved on to 'By The Rivers Dark' from Leonard Cohen's *Ten New Songs* album [Sony 5012022]. Listening to the EAR 8L6 it sounded like the equivalent of a bold, full-blooded red wine. With immensely powerful and robust bass lines underpinning this brooding track, the EAR seemed in its element:

Cohen's dark vocals were uncommonly clear and thrown to the fore of the image, if to the detriment of delicate details further back in



the mix. The 8L6 wasn't as 'open'-sounding as I'd have liked, appearing a touch congested.

Swapping from the EAR to the Shanling this time, it once again was demonstrably leaner but none the worse for it as the resultant audio picture was clear and explicit, with more of a 3D image that better allowed one to pick out female voices and keyboard lines far back in the mix. Not as bold and powerful-sounding as the EAR, it nevertheless sounded fast and clean. This Cohen track is a dense mix of keyboards and backing vocal lines that can be swamped by Cohen's close-miked, growling vocal delivery and the composition's over-the-top bass line. Where the EAR sounded a bit cloying, the Shanling sounded more fresh and open.

SPINE-TINGLING

Things improved even further when switching to the PrimaLuna. The DiaLogue One delivered a high resolution, detailed picture of this dense multi-tracked recording, sounding loud and powerful and simultaneously delicate and refined through the middle and upper registers. It demonstrated a spine-tingling ability to convey really clean transients, with plenty of air that allowed me to hear right into the dense mix.

Interestingly, when I moved on to Pure Sound's A30 it threw out an uncommonly massive image that I hadn't noticed from the A30 when playing the Diana Krall track. I observed texture and detail in backing vocals that had gone unnoticed with the EAR and Shanling. Despite its price the Pure Sound wasn't put in the shade by the PrimaLuna amplifier either, lacking only in its resolution of very fine background details that were more easily discerned with the Dialogue One.

In comparison Unison Research's P40 had a tendency to sound overwhelming thanks to the over-the-top low bass in this particular recording, consequently it was less open-sounding in the midband. ➔

ABOVE: Pure Sound's A30 is minimalist in the extreme, with no remote control and just three line inputs. A discreet toggle switch on the top plate selects between ultralinear and triode operation

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Pure Sound A30

While Pure Sound is a relatively new company, its proprietor, Guy Sergeant is no newcomer to the British hi-fi scene. He started the Voyd turntable business with Guy Adams in the 1980s and worked for Audio Innovations for a decade until its acquisition by the Audio Partnership, after which he worked for JPW/Heybrook until Peerless took over and moved operations to India. Deciding there was room in the market for affordable Class A valve amps, Guy found a manufacturer in China that could produce amplifiers to his design and specification. Pure Sound is also the distributor for Heco loudspeakers from Germany.

Certainly I was up close and personal with Cohen's voice, while the depth and width of the image were commendable indeed. However it required more effort to listen in to the subtle details of keyboard fills and the female voices buried far back in the soundstage.

RAISING THE BAR

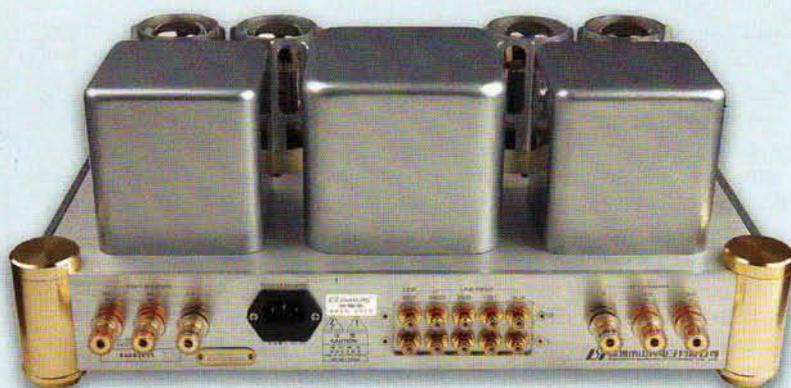
Curious to hear how this clutch of valve integrations might interpret sources recorded at high resolution I spun up the Omnibus Wind Ensemble's *Music of Frank Zappa* SACD [Opus 3, 19423]. This is an audiophile analogue recording from 1995, made using a simple Blumlein single-point stereo microphone arrangement which has captured a natural, unembellished sound of real instruments in a natural acoustic. The dual-layered hybrid SACD allows one to listen to this recording at CD quality and then switch to higher-res DSD quality on the SACD layer. I'm used to playing this disc to any visitors curious to audition 'hi-res digital', my system normally more than capable of showing the difference between the two layers on the disc.

None of these five integrations truly did justice to the SACD. Knowing that the SACD layer should better portray the tonal colours and textures of the instruments, with an increased sense of realism to the musical event, all five amplifiers failed to show this in the obvious manner to which I'm accustomed. I could perceive subtle differences between the CD and SACD

'None of these five valve integrations truly did justice to the higher-res SACD'

layers because I've heard them before; had I not, I would have been underwhelmed and could quite easily jump to the conclusion that the differences are no more than subtle, comprising merely a 'cosmetic' variation in overall tonal shading.

Similarly I was a little unimpressed when 'rocking out' to a deeply unfashionable ageing rock classic from Foreigner, 1981's *Foreigner 4* album, remastered for DVD-Audio in 2001 [Atlantic/Rhino 8122743669]. None of these amplifiers demonstrated the 'chalk 'n' cheese' difference that I'm accustomed to when comparing the CD with the 24-bit/96kHz DVD-A. Listening to the pumping rhythm of 'Juke Box Hero' it is usually apparent in an instant that the DVD-Audio disc makes the CD version sound compressed and dynamically squashed, the hi-res version demonstrating a sparkling realism to cymbal crashes along with substantially better



dynamic attack to bass and drums. Of this group of amplifiers, only the EAR 8L6 and PrimaLuna DiaLogue One did much justice to the superiority of the DVD-A remaster, the others tending to gloss over the enhanced resolution of the 24/96 version.

Neil Young's 1971 classic *Harvest* album is one of the most fascinating DVD-As in my collection [Reprise 9362-48100-9]. As well as a 24/96 multichannel stream (that can be played in stereo, of course) it contains a two-channel 24-bit/192kHz track taken from the original stereo master used to cut the vinyl more than 40 years ago. When I first acquired this disc I was taken aback to discover that the 96kHz version actually sounds better than the 192kHz version! You can hear that for the multichannel version it has been remixed and subsequently remastered from the recording's multitrack tape – a generation back from the stereo master tape of 1971. This time even the EAR and PrimaLuna failed to portray the difference in clarity that I'm used to hearing.

VINYL ADDICTIONS

The majority of valve amplifier aficionados don't need me to tell them that there is musical magic hidden within the depths of 'the black stuff'. Sure enough, as I spent many hours ploughing through a selection of favourite LPs (and a few 12in singles that haven't seen daylight for a long while, from the likes of Depeche Mode, Heaven 17 and Frankie Goes to Hollywood), not one of these five amplifiers left me feeling wanting for much more when playing records. If you're of a mind that that you need a pair of Krell monoblocks to do justice to the thumping, pumping bass lines of Frankie's 'Relax', think again. Even the modest power of Pure Sound's A30 proved more than enough to shake the rafters without any feeling of strain or dynamic compression. And Grace Jones' 'Slave To The Rhythm' sounded altogether more dynamic, powerful and ⇨

ABOVE: Shanling's STP-80 has four line inputs and a fixed-level line output for recording whatever source is playing. The supplied RC-09 handset allows remote control of volume and source selection – and will also control a Shanling CD/SACD player. A VFD on the front panel displays input selection and volume setting. It can be dimmed, but not defeated



Shanling STP-80

Based in China's Shenzhen City, the history of the Shanling Electronic Company dates back to when it launched its first stereo power amplifier in 1988. Along with a joint venture – the Shenzhen Shanling Digital Technology Development Company – today Shanling occupies a 7000m² factory where it can manufacture precision metalwork for all manner of audio components, both for its own products and other manufacturers. The brand has become synonymous with competitively-priced valve electronics, although solid-state amps are also in Shanling's portfolio. The UK distributor is Real Hi-Fi of Standish, Lancashire.

organic on vinyl than my CD copy with its sibilant, hard edge and complete absence of the infrabass synth notes that are cut into the vinyl release. The EAR 8L6 truly kicked with 'Slave To The Rhythm', as did the Unison Research P40. Both models were at home with the driving bass and percussion, while their smooth character took any sting out of the track's tendency toward stridency. With such a heavily processed electronic track the PrimaLuna failed to shine quite so much and the Shanling and Pure Sound amps sounded a little anaemic and 'electronic' when quickly compared back-to-back in this group.

EASY ON THE EAR

Choosing a treasured copy of the LPO's *Arnold Overtures* 2LP set as a reference source for analytical listening [Reference Recordings RR-48], this brightly-lit 18-year-old recording from Watford Town Hall sounded powerful and majestic through the EAR. The opening minutes of 'A Sussex Overture' had crispness as well as delicacy, sounding vivid, open, and transparent, with an easy-on-the-ear quality that managed not to exaggerate the bright tonal quality of the recording. With the Shanling there was a lack of 'oomph' compared with the EAR, although I felt that the sharp rasp of the brass section and crashing cymbals were better portrayed. Less comfortable on the ear, perhaps, and lighter in balance, the Shanling sounded really explicit.

'A valve amp can create a musical experience full of drama and expression'

So too did the PrimaLuna, but with broader tonal shading that made the brass sound palpably more real. Moreover the shimmer of the cymbals wasn't buried by their initial 'crash'. The massive kettle drum had more of the power and weight displayed by the EAR, as well. Moving on to the Pure Sound, once again the A30 demonstrated its exceptional image width and depth capability. It didn't have the thunderous bass power of EAR's 8L6 but it wasn't far short, being the equal of the PrimaLuna. Meanwhile it had tremendous presence through the midband that, unlike the other amps, brought the orchestra right into the room.

If I'd been a little underwhelmed by the Unison Research until now, the P40 came into its own with this LPO analogue recording. Along with bass power that seemed the equal of the EAR, it unraveled layers of inner detail to convey hall ambience and low-level dynamic



inflections on a wide, deep soundstage, rendering this wonderful audiophile recording with startlingly lifelike realism. Fabulous stuff.

Assuming that you don't want to listen at extraordinarily high sound pressure levels, and that speaker load matching is carefully attended to as well, a valve amplifier can create a natural musical experience full of drama, expression and listener involvement. All five integrateds tested here displayed a seductively liquid sound character, rich in texture and dynamic expression along with a low fatigue factor that should have you enjoying music for hours on end. Without doubt each amplifier has its own 'character'. And each amplifier seems to vary depending on source material, sounding better with simple recordings than with dense, complicated tracks. Be prepared to invest time auditioning various types of music through your choice of speakers before making a choice. The experience of a specialist dealer must not be undervalued here.

HI-RES FUTURE

I was disappointed to find that none of them fully did justice to higher resolution recordings. If you feel that your entertainment future will soon involve downloading hi-res digital files you might be best advised to consider amplifiers other than these.

While it's common for LP lovers in particular to swear by valve amplifiers, one can't help feeling that in many instances – especially where listeners complain that CD sounds bleached and 'hard' – a valve amplifier might prove a perfect tonic for tired ears. If your system becomes wearing after an evening's listening, perhaps you should consider investing in a sweet-sounding valve amplifier such as one of these! ☺

ABOVE: Unison Research's P40 integrated has four line inputs, one fixed level line output labelled Tape, and a variable (preamp) output disingenuously labelled Sub (L+R) Out. As with other Unison Research amplifiers, there's a socket for providing power to the company's 'Simply Phono' add-on phono stage



Unison Research P40

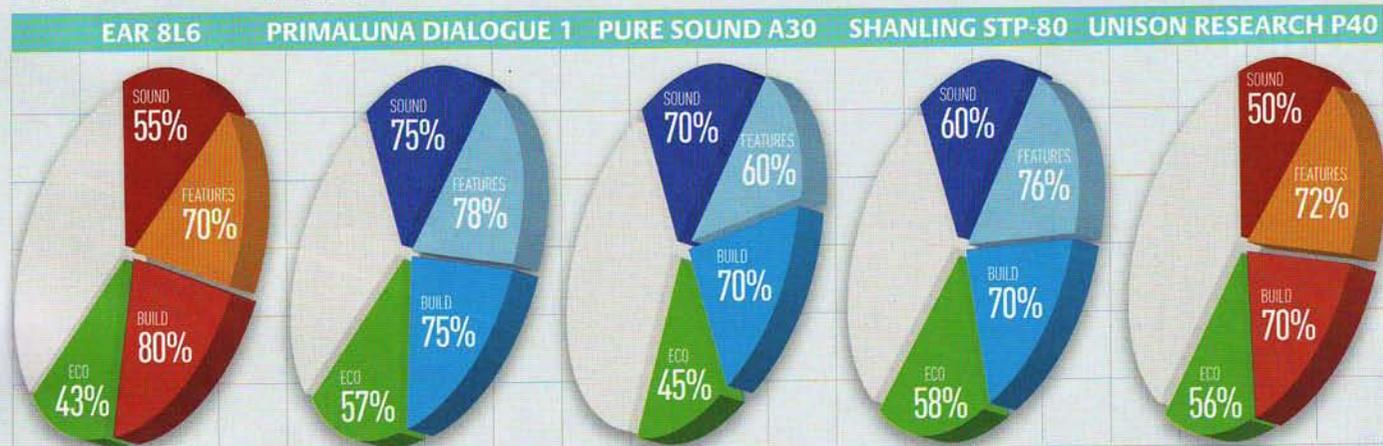
The manufacturing company behind Unison Research valve amplifiers is A.R.I.A. – Advanced Research in Audio – based just outside Treviso in northern Italy. As well as Unison Research pure valve amplifiers it manufactures a range of hybrid valve/solid-state models dubbed Unico. Many key components – such as the power supply and output transformers which are vital for good sound quality – are made in-house. And although this P40 isn't one of them, Unison Research's products are often quite exotic-looking due to their use of materials like sculpted wood and stainless steel. The UK importer is UKD of Iver, Buckinghamshire.

VALVE AMPLIFIER VERDICT

With only three inputs and no remote control the Pure Sound A30 is decidedly minimalist and its exposed valves might preclude it from some family households. However, it represents excellent value and displays fabulous spatial imaging along with a fresh, 'open' sound character. Less impressive in terms of image three-dimensionality yet commendably fast and engaging, Shanling's STP-80 also represents very good value – if its slightly gregarious

styling doesn't put you off. It comes with full remote control operation, too. With the two more expensive models in this group, the Unison Research P40 and EAR 8L6, bass was extended with good rhythmic drive on appropriate recordings. But in my system both models sounded a touch 'heavy', albeit with a sense of authority that made recordings of large-scale orchestral works enthralling. From both of these amplifiers I'd have liked a tad more presence and

sparkle. The P40 has remote control of volume, while the 8L6 is strictly 'manual'. This might be an important factor in any purchasing decision unless you sit next to your rack of kit. The star of the group was the PrimaLuna Dialogue One. Its midrange had a bit more presence than the others, displaying a broad tonal palette that was richly textured. With enough inputs to cover most requirements and full remote control, it is judged the best value of this group. ⏻



EAR 8L6

Despite its 'Class A' operation, power consumption still increases from 285W (idle) to 330W at its rated 2x50W output. Power into lower impedances is held to ~30W (~50W dynamic) via its 8ohm tap but at least distortion is impressively low, just ~0.05% through upper bass and midrange at 10W/8ohm and increasing to 1% at 20kHz. THD also increases gently with output, from 0.02% at 1W, 0.5% at 50W and 4% at 75W/8ohm. These are exemplary figures for a valve amp! Output impedance was a little higher than anticipated at ~1.4ohm and an increase in white noise (rather than hum) means the A-wtd S/N is just 72dB. **PM**

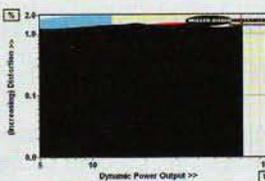
Graph below: Dynamic power output into 8ohm (black), 4ohm (red), 2ohm (blue) and 1ohm (green)



PRIMALUNA DIALOGUE 1

Rumour has it that the DiaLogue One is really a Dialogue Two running with EL34s rather than KT88s. While the 2x50W maximum power output (into both 8 and 4ohm) is the same, distortion was certainly a lot higher in this sample, particularly through the right channel. At 10W/8ohm distortion falls to a minimum of 1.6% (left) and 3.2% (right) with a maximum of 7.5% at 20kHz! The high output impedance is, er, higher still at ~5ohm and this will add further colour by modifying the amp/speaker response. The A-wtd S/N is on par at 82dB (re. OdBW), channel balance good at 0.3dB and separation also satisfactory at >58dB. **PM**

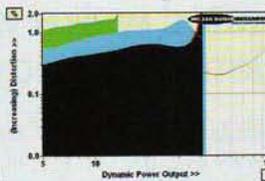
Graph below: Dynamic power output into 8ohm (black), 4ohm (red) and 2ohm (blue)



PURE SOUND A30

Tested in ultralinear mode, the A30 shows a distortion trend that increases uniformly with output, so the amp achieves around 2x20W at 1% THD and 2x35W at 2% THD. It even maintains some 2x25W at 20Hz. The A30 is a true Class A design and eats around 260W from the wall at idle or full output, but it's also very slightly 'buzzy' with extended PSU harmonics (up to 2kHz) compromising the overall 78.5dB S/N ratio. Distortion is high at bass frequencies on the left channel but otherwise hits a minimum of ~0.2% at 100Hz and a max. of 1.85% at 20kHz. The 1.5-2.4ohm output impedance will incur a variable resp. with some speakers. **PM**

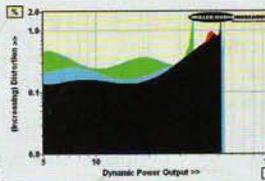
Graph below: Dynamic power output into 8ohm (black), 4ohm (red), 2ohm (blue) and 1ohm (green)



SHANLING STP-80

Gain is a high +44dB but there's no shortfall in power from the STP-80 which meets its 2x35W specification at a good 2x47W into both 8 and 4ohm loads via its 8 and 4ohm taps, respectively. Nevertheless the amp does not better the <0.1% THD quoted in the manual. In fact distortion never falls to 0.1% from 1-40W and is typically 0.2% (right channel) and 0.45% (left channel) from 20Hz-10kHz, rising at higher frequencies. We've seen this difference in L/R distortion 'character' in several previous Shanling products, but at least the ±0.1dB response, ~0.65ohm output impedance and 79dB A-wtd S/N are consistent between L/R. **PM**

Graph below: Dynamic power output into 8ohm (black), 4ohm (red), 2ohm (blue) and 1ohm (green)

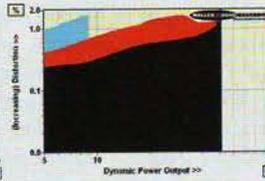


UNISON RESEARCH P40

This ultralinear-mode valve amplifier is capable of sustaining 2x59W into 8/4ohm loads (only 50W dynamic) through the midrange and, thanks to its substantial output transformers, down to as low as 20Hz in the bass. The single output tap is rated at 6ohm and offers a practical source impedance of 1.3-1.5ohm which will incur some response irregularities according to the speaker load.

Into a non-reactive 8ohm, the response is -1.1dB/20kHz with distortion around 0.5% up to 10kHz, beyond which it quickly increases above 1%. The P40 is the 'quietest' amp in our test with an A-wtd S/N ratio of 85dB (re. OdBW). **PM**

Graph below: Dynamic power output into 8ohm (black), 4ohm (red) and 2ohm (blue)



TEST PARAMETERS / MODEL	EAR 8L6	PRIMALUNA DIALOGUE 1	PURE SOUND A30	SHANLING STP-80	UNISON RESEARCH P40
Power output (<1% THD, 8/4ohm)	2x55W 2x29W	2x50W 2x50W	2x35W 2x38W	2x48W 2x47W	2x58W 2x58W
Dynamic power (8/4/2/1ohm)	66W 48W 23W 10W	72W 71W 13W	43W 42W 40W 14W	53W 52W 54W 46W	50W 50W 9W
Output impedance (20Hz-20kHz)	1.22-2.70ohm	5.05-5.35ohm	1.5-2.4ohm	0.60-0.65ohm	1.29-1.36ohm
Frequency response (20Hz-20kHz)	-0.3dB to -1.25dB	-0.55dB to -0.45dB	-0.25dB to -0.30dB	-0.1dB to -1.2dB	-0.1dB to -1.1dB
Distortion (20Hz-20kHz at 10W)	0.043-1.0%	1.6-3.2% (3.2-7.5% R ch)	0.21-1.85%	0.95-1.0% (0.17-0.8% R ch)	0.32-1.30%
A-wtd S/N ratio (re. OdBW)	72.0dB	82.3dB	78.5dB	78.9dB	84.9dB
Stereo separation (20Hz-20kHz)	>50dB	>58dB	>55dB	>60dB	>48dB